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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,426

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Alexander Walter

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EXAMINER

PAPE, ZACHARY

ART UNIT

PAPER NUMBER

2835

MAIL DATE

DELIVERY MODE

06/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/581,426	WALTER, ALEXANDER	
	Examiner	Art Unit	
	Zachary M. Pape	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-13, 16 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 6/2/2006 has been fully considered and is attached hereto.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. **Therefore, the heat exchanger being arranged serially behind said fan as per claims 12 and 20, the at least one power section and said at least one control section are physically separate from one another as per claim 16, the control section comprising elements which are arranged in said at least one power section as per claim 17, and the at least one power section comprises elements which are arranged in said at least one control section as per claim 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.**

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 10, 12 and 20 are objected to because of the following informalities:

Claim 10 recites, "The cooling system of claim 1" which is incorrect since claim 1 has been cancelled. For the purposes of examination, the claim will be examined as, "The cooling system of claim 9".

Claims 12 and 20 recite, "said first heat exchanger being arranged serially behind said fan" which appears to be incorrect since Fig 1 shows that the heat exchangers are in front of the fan (Since airflows past the blades of the fan and then over the heat exchanger). For the purposes of examination the claims will be interpreted as reading "serially in front of said fan".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-13, 16, 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hrovat et al. (US 6,651,761 – hereinafter, “Hrovat”).

With respect to claims 9, 13, and 19, Hrovat teaches (In Fig 1) a cooling system for an electrical power unit of an electrically operated vehicle, said power unit comprising at least one power section (42) and at least one control section (26), said cooling system comprising: a first cooling circuit (22) arranged primarily for cooling said at least one control section, said first cooling circuit comprising a first heat exchanger (28) designed and arranged to feed coolant to said at least one control section at a first coolant temperature; and a second cooling circuit (20) arranged primarily for cooling said at least one power section, said second cooling circuit comprising a second heat exchanger (32) designed and arranged to feed coolant to said at least one power section at a second coolant temperature which is higher than said first coolant temperature (Col 3 Lines 45 – 54).

With respect to claim 10, Hrovat teaches (Col 3, Lines 45-52) that the first heat exchanger (28) is designed and arranged to feed coolant to said at least one control section at a coolant temperature of approximately 70C, and said second heat

exchanger (32) is designed and arranged to feed coolant to said at least one power section at a coolant temperature of approximately 90C.

With respect to claim 11, Hrovat teaches (In Fig 1) that said second heat exchanger (32) is arranged serially behind said first heat exchanger (28) with respect to a direction of air flow (34) toward said first heat exchanger.

With respect to claims 12 and 20, Hrovat further teaches (In Fig 1) a fan (36), said first heat exchanger being arranged serially in front of said fan (See Fig 1).

With respect to claim 16, Hrovat further teaches (In Fig 1) that said at least one power section (42) and said at least one control section (26) are physically separate from one another.

With respect to claim 21, Hrovat further teaches (In Fig 1) blowing air toward said first heat exchanger (28) with a fan (36).

Allowable Subject Matter

4. Claims 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 14-15, the allowability resides in the overall structure of the device as recited in dependent claim 14 and at least in part because claim 14

recites, "said at least one power section and said at least one control section are arranged on a common printed circuit board".

The aforementioned limitations in combination with all remaining limitations of claims 13 and 14 are believed to render said claim 14 and all claims dependent therefrom (Claim 15) patentable over the art of record.

While Hrovat teaches the limitations of claim 13 as per above, Hrovat fails to teach or suggest that the power section and control section are arranged on a common printed circuit board as claimed.

With respect to claim 17, the allowability resides in the overall structure of the device as recited in dependent claim 17 and at least in part because claim 17 recites, "said control section comprises elements which are arranged in said at least one power section".

The aforementioned limitations in combination with all remaining limitations of claims 13 and 17 are believed to render said claim 17 patentable over the art of record.

While Hrovat teaches the limitations of claim 13 as per above, Hrovat fails to teach or suggest that the control section comprises elements which are arranged in said at least one power section as claimed.

With respect to claim 18, the allowability resides in the overall structure of the device as recited in dependent claim 18 and at least in part because claim 18 recites, "said at least one power section comprises elements which are arranged in said at least one control section".

The aforementioned limitations in combination with all remaining limitations of claims 13 and 18 are believed to render said claim 18 patentable over the art of record.

While Hrovat teaches the limitations of claim 13 as per above, Hrovat fails to teach or suggest that the at least one power section comprises elements which are arranged in said at least one control section as claimed.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2006/0118066; US 6,450,275; US 6,323,613; US 6,661,659; US 6,442,023; US 6,326,761; US 5,349,498; US 5,966,291; US 6,909,607 all further teach cooling systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon.- Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2835

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. M. P./
Examiner, Art Unit 2835

/Jayprakash N Gandhi/

Supervisory Patent Examiner, Art Unit 2835